

**IN THE CLAIMS:**

Please amend the claims as follows, substituting any amended claims(s) for the corresponding pending claim(s):

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1                    1. (amended) A block decision feedback equalizer for channel equalization  
2 *a*1 comprising:  
3                    a forward filter receiving and concurrently processing blocks containing a  
4 predetermined number of input samples;  
5                    a feedback filter receiving and concurrently processing blocks containing  
6 the predetermined number of demapped equalized output samples; and  
7                    a signal adder combining filtered input samples for a current block from  
8 the forward filter and filtered output samples for the current block from the feedback  
9 filter to produce equalized output samples for the current block.

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1                    2. (unchanged) The block decision feedback equalizer as set forth in Claim 1  
2 wherein the signal adder receives intra-block time varying output correction coefficients  
3 for both the forward and feedback filters for addition to the filtered input samples and the  
4 filtered output samples in producing the equalized samples.

1           3. (unchanged) The block decision feedback equalizer as set forth in Claim 1  
2 wherein the signal adder receives only intra-block time varying output correction  
3 coefficients for the forward filter and not intra-block time varying output correction  
4 coefficients for the feedback filter for addition to the filtered input samples and the  
5 filtered output samples in producing the equalized samples.

1           4. (unchanged) The block decision feedback equalizer as set forth in Claim 3  
2 wherein the signal adder receives the intra-block time varying output correction  
3 coefficients for the forward filter only when an error measurement for the current block  
4 exceeds a threshold.

1           5. (unchanged) The block decision feedback equalizer as set forth in Claim 3  
2 wherein filter coefficients utilized to produce the intra-block time varying output  
3 correction coefficients are computed at a rate lower than a rate at which input samples are  
4 received.

1           6. (unchanged) The block decision feedback equalizer as set forth in Claim 1  
2 wherein the signal adder receives neither intra-block time varying output correction  
3 coefficients for the forward filter nor intra-block time varying output correction  
4 coefficients for the feedback filter for addition to the filtered input samples and the  
5 filtered output samples in producing the equalized samples.

1           7. (unchanged) The block decision feedback equalizer as set forth in Claim 1  
2 further comprising:

3                 a forward error computation unit receiving the input samples to compute  
4 an inverse channel estimate and an error vector and producing an output correction vector  
5 for the forward filter; and

6                 a feedback error computation unit receiving the demapped equalized  
7 output samples to compute the inverse channel estimate and the error vector and  
8 producing an output correction vector for the feedback filter.

1           8. (unchanged) A receiver comprising:

2                 an input for receiving an input signal;

3                 a channel decoder for decoding the input signals; and

4                 a block decision feedback equalizer within the channel decoder for  
5 channel equalization comprising:

6                     a forward filter receiving and concurrently processing blocks  
7 containing a predetermined number of input samples from the input signal;

8                     a feedback filter receiving and concurrently processing blocks  
9 containing the predetermined number of demapped equalized output samples; and

10                    a signal adder combining filtered input samples for a current block  
11 from the forward filter and filtered output samples for the current block from the  
12 feedback filter to produce equalized output samples for the current block.

1           9. (unchanged) The receiver as set forth in Claim 8 wherein the signal adder  
2 receives intra-block time varying output correction coefficients for both the forward and  
3 feedback filters for addition to the filtered input samples and the filtered output samples  
4 in producing the equalized samples.

1           10. (unchanged) The receiver as set forth in Claim 8 wherein the signal adder  
2 receives only intra-block time varying output correction coefficients for the forward filter  
3 and not intra-block time varying output correction coefficients for the feedback filter for  
4 addition to the filtered input samples and the filtered output samples in producing the  
5 equalized samples.

1           11. (unchanged) The receiver as set forth in Claim 10 wherein the signal adder  
2 receives the intra-block time varying output correction coefficients for the forward filter  
3 only when an error measurement for the current block exceeds a threshold.

1           12. (unchanged) The receiver as set forth in Claim 10 wherein filter coefficients  
2 utilized to produce the intra-block time varying output correction coefficients are  
3 computed for the forward filter at a rate lower than a rate at which input samples are  
4 received.

1           13. (unchanged) The receiver as set forth in Claim 8 wherein the signal adder  
2 receives neither intra-block time varying output correction coefficients for the forward  
3 filter nor intra-block time varying output correction coefficients for the feedback filter for  
4 addition to the filtered input samples and the filtered output samples in producing the  
5 equalized samples.

1           14. (unchanged) The receiver as set forth in Claim 8 wherein the block decision  
2 feedback equalizer further comprises:

3                   a forward error computation unit receiving the input samples to compute  
4 an inverse channel estimate and an error vector and producing an output correction vector  
5 for the forward filter; and

6                   a feedback error computation unit receiving the demapped equalized  
7 output samples to compute the inverse channel estimate and the error vector and  
8 producing an output correction vector for the feedback filter.

1 15. (amended) A method of block channel equalization comprising:

2 *az* receiving and concurrently processing blocks containing a predetermined  
3 number of input samples within a forward filter;  
4 receiving and concurrently processing blocks containing the  
5 predetermined number of demapped equalized output samples within a feedback filter;  
6 and  
7 combining filtered input samples for a current block from the forward  
8 filter and filtered output samples for the current block from the feedback filter within a  
9 signal adder to produce equalized output samples for the current block.

1 16. (unchanged) The method as set forth in Claim 15 further comprising:

2 receiving intra-block time varying output correction coefficients for both  
3 the forward and feedback filters within the signal adder for addition to the filtered input  
4 samples and the filtered output samples in producing the equalized samples.

1 17. (unchanged) The method as set forth in Claim 15 further comprising:

2 receiving only intra-block time varying output correction coefficients for  
3 the forward filter within the signal adder and not intra-block time varying output  
4 correction coefficients for the feedback filter for addition to the filtered input samples and  
5 the filtered output samples in producing the equalized samples.

1           18. (unchanged) The method as set forth in Claim 17 wherein the step of  
2 receiving only intra-block time varying output correction coefficients for the forward  
3 filter within the signal adder and not intra-block time varying output correction  
4 coefficients for the feedback filter for addition to the filtered input samples and the  
5 filtered output samples in producing the equalized samples further comprises:

6           receiving the intra-block time varying output correction coefficients for  
7 the forward filter only when an error measurement for the current block exceeds a  
8 threshold.

1           19. (unchanged) The method as set forth in Claim 17 wherein the step of  
2 receiving only intra-block time varying output correction coefficients for the forward  
3 filter within the signal adder and not intra-block time varying output correction  
4 coefficients for the feedback filter for addition to the filtered input samples and the  
5 filtered output samples in producing the equalized samples further comprises:

6           computing filter coefficients utilized to produce the intra-block time  
7 varying output correction coefficients for the forward filter at a rate lower than a rate at  
8 which the filtered input samples are received.

1           20. (unchanged) The method as set forth in Claim 15 further comprising:

2                   receiving neither intra-block time varying output correction coefficients

3           for the forward filter nor intra-block time varying output correction coefficients for the

4           feedback filter within the signal adder for addition to the filtered input samples and the

5           filtered output samples in producing the equalized samples.